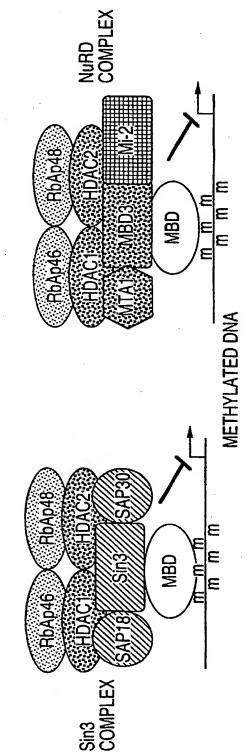
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THE ROLE OF MBD2/MBD3 IN METHYLATION-DEPENDENT TRANSCRIPTIONAL REPRESSION MBD2 AND MeCP2 ASSOCIATE WITH Sin3, A KNOWN CORE COMPONENT IN REPRESSOR COMPLEXES

MBD3 IS A CORE COMPONENT OF THE NURD REPRESSOR COMPLEX

MBD3 AND MBD2 ASSOCIATE IN vitro

MBD2 IS A COMPONENT OF THE MeCP1 REPRESSOR COMPLEX



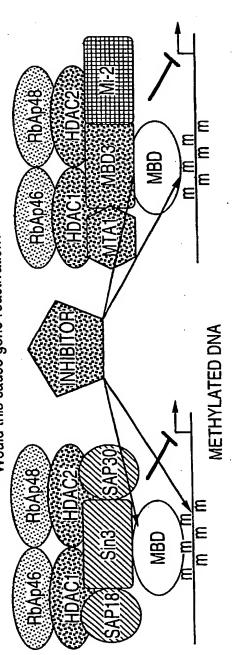
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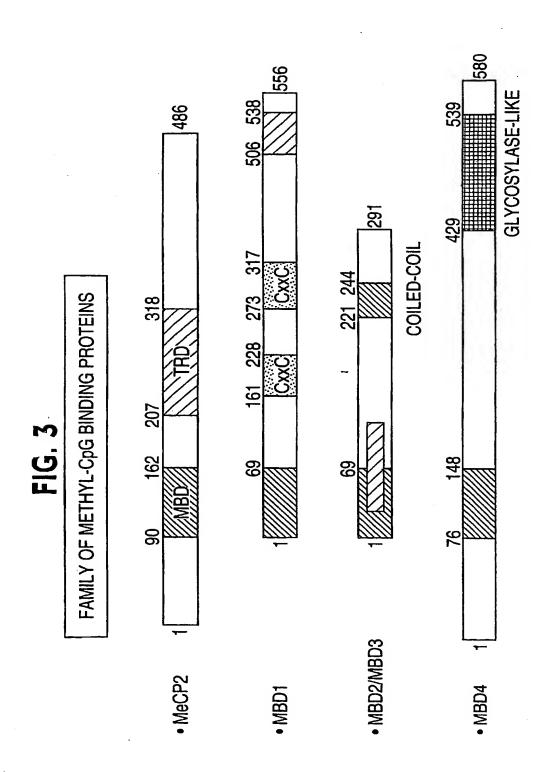
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METHYLATION AS A PHARMACOLOGICAL TARGET

5-aza-2' deoxycytidine
 Inhibits DNA methylation

Potential Inhibition of MBD proteins
 Alternative to inhibiting DNA methylation
 Would this cause gene reactivation?



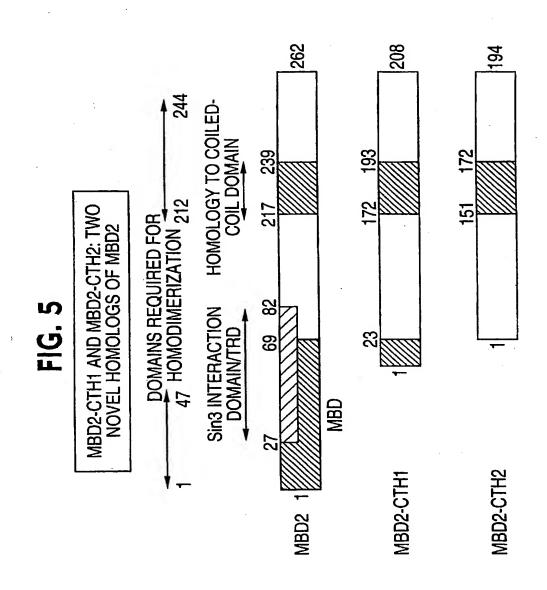


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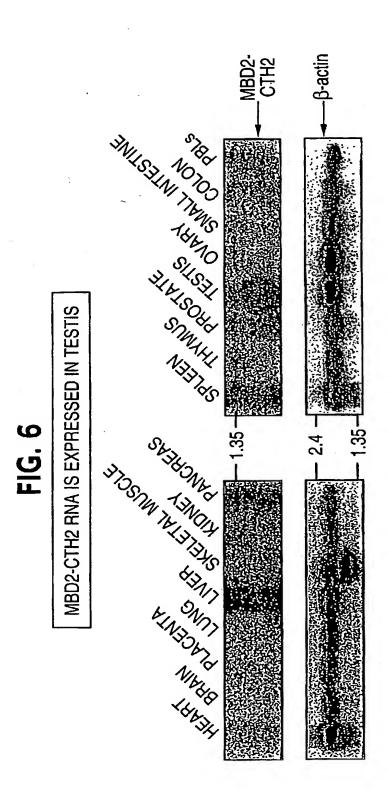
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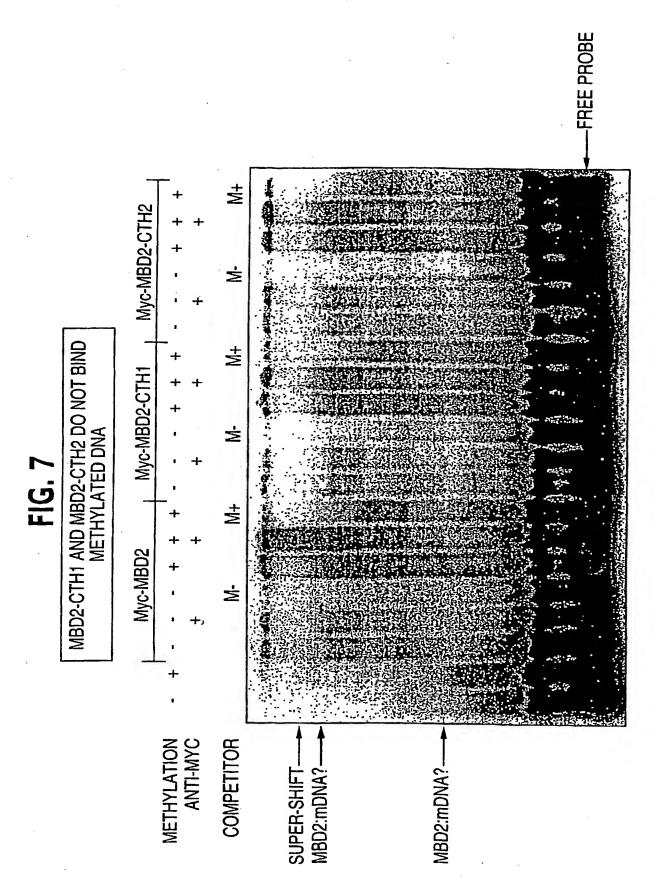
MBD2	MBD2	MBO2	MBD2	MBD2	MBD2
MBD3	MBD3	MBO3	MBD3	MBD3	MBD3
MBD2-CTK2	MBD2-CTH2	MBO2-CTH2	MBD2-CTH2	MBD2-CTH2	MBD2-CTH2
MBD2-CTK1	MBD2-CTH1	MBO2-CTH1	MBD2-CTH1	MBD2-CTH1	MBD2-CTH1
FIG. 4 TWO NOVEL HOMOLOGS OF MBD2 M	51 TVDLSSFDFRTGKMMPPSKLOKNKORLRNDPLNONKGKPDLNTTLPIROTASIFKO 56 SMDLSTFDFRTGKMLMSKMNKSRORVRYDSSNOVKGKPDLNTTLPIROTASIFKO 3GKLKRRMMPWALQKKREIHMAKAHRRRAARSALPMRLTSCTFRR	150 150 150 150 150 150 150 160 PRO LFWEKRLOGISAS DVTEOLIKTMELPKG 111 PVTKITNHPSNKVKS DP-QRAVD OPRO LFWEKRLSGINAFDIAEELVKTMOLPKG 38 PVTRITOHPGNEVRTHOWEESLEKPOOVCHORROGIOAYS SAGELS STLOLANIT 50 PVTRIRSHPDNOVRRRKGDEHLEKPQOLCAVRRLOGIOAYS SAGELS STLOLANIT 50 PVTRIRSHPDNOVRRRKGDEHLEKPQOLCAVRRLOGIOAYS SAGELS STLOLANIT	170 180	213 FILV TO E D I R K O E E R V O O V R K K L E E A L M A D I L S R A A D T E E M 218 F M V TO E D I R K O E E L V O O V R K R L E E A L M A D M L A H V E E L A R D G E A P L D K A C A E D D D E 147 F L V T E E D I R K O E G K V K T V R E R L A I A L I A D G L A M E A E K V R D O E G F E C D I R R O A R R V K A R E R L A I A L O A D R L A R O A E M L	253 · D I E M D S G D E A E H V 273 · E D E E E E E E E E P D P D P E M E H V 194 · · · · · · · · · · · · R 208



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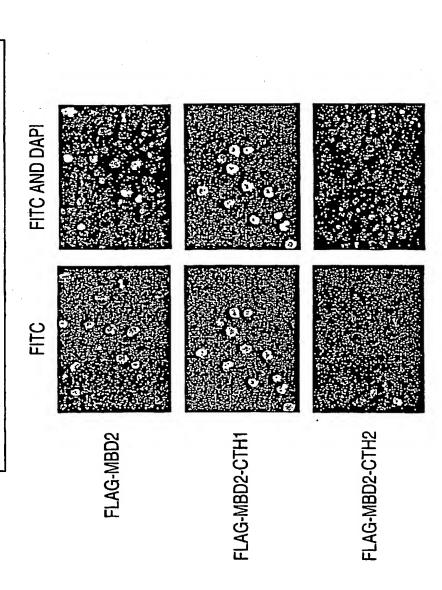
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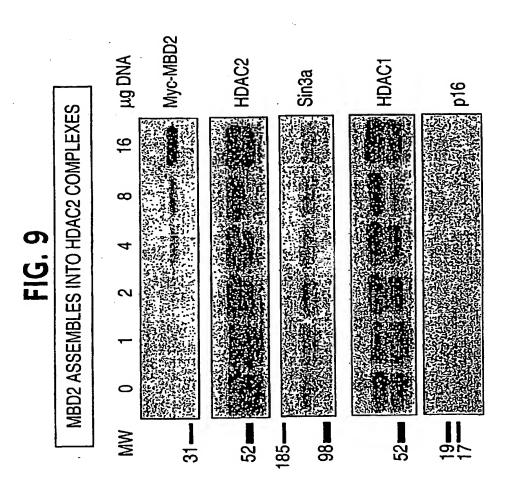
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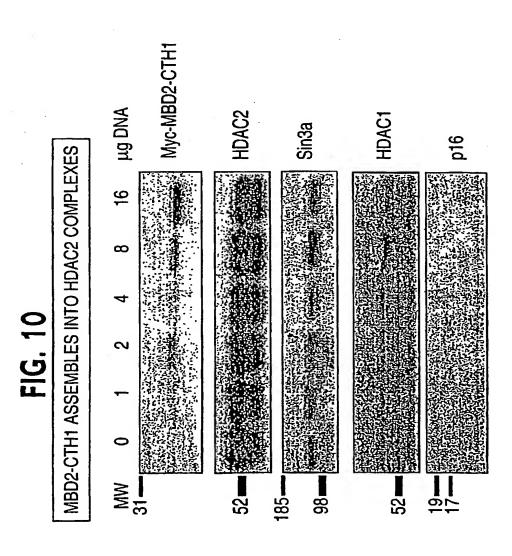
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F. 8

MBD2-CTH1 AND MBD2-CTH2 LOCALIZE TO THE NUCLEUS

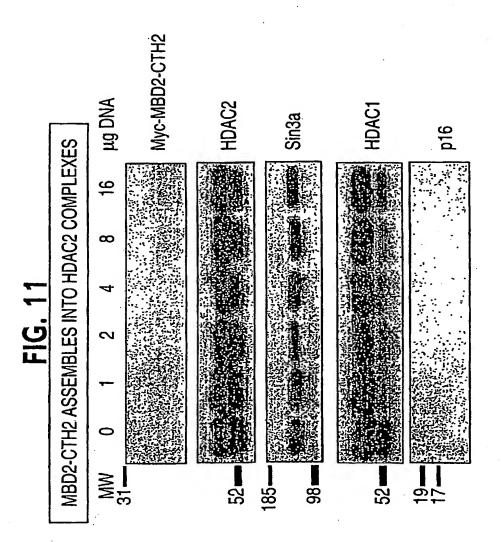






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FIG. 12

SUMMARY FOR MBD2-CTH1 AND MBD2-CTH2

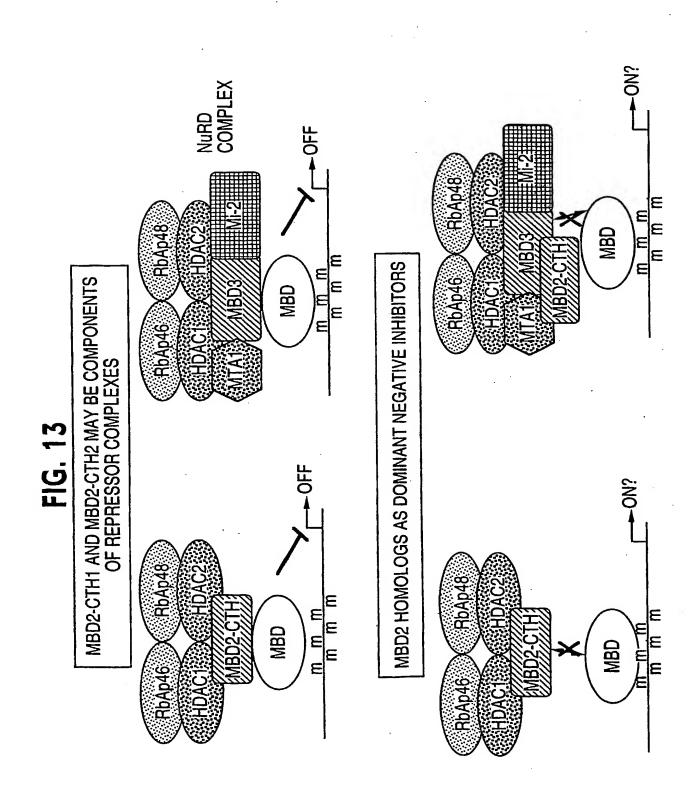
 BOTH HAVE SEQUENCE HOMOLOGY TO THE C-TERMINUS OF MBD2, BUT LACK COMPLETE MBDS.

MBD2-CTH2 EXPRESSED IN TESTIS.

BOTH LOCALIZE TO THE NUCLEUS.

BOTH DO NOT BIND METHYLATED DNA DIRECTLY

BOTH ASSEMBLE INTO HDAC2 REPRESSOR COMPLEXES.



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